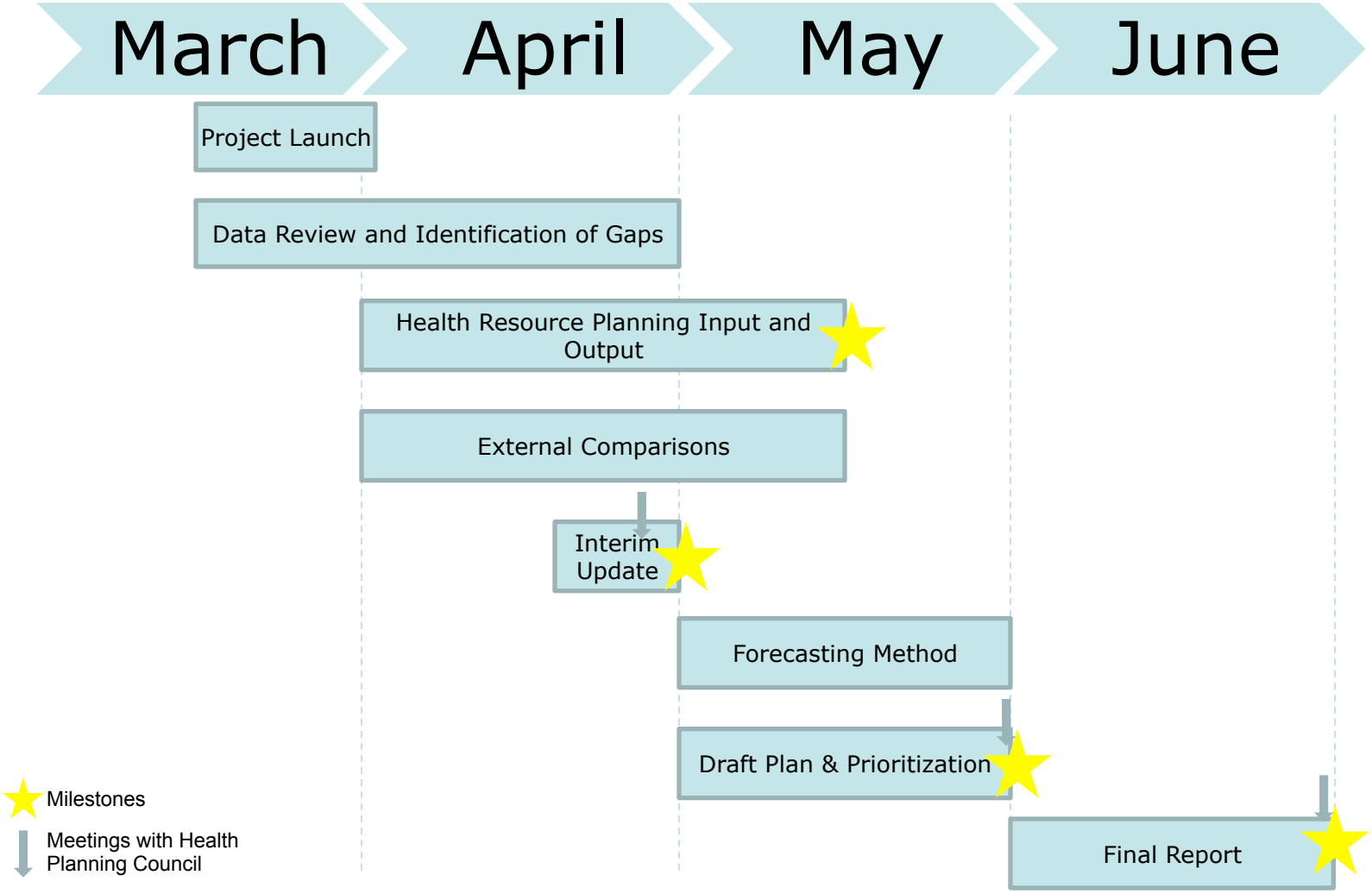
EOHHS Health Planning Council

Meeting #2
May 23, 2013

Agenda

- Project Progress to Date
- Scope of Services for Health Planning Year 1 (objective – Council approval)
  - Definitions in Health Planning
  - Levels of Analysis
    - Criteria
    - Examples
  - Services by Level (objective – Council feedback)
- Data Gaps in Year 1
  - Review of Gaps in High Priority Services
  - Discussion of Assessments for These Services

Schedule for Development of Project and Analytic Plan



Levels of Analysis

Definitions – Key Terms used in Health Planning

- Workload: measurable volume of services provided in past. Typically measured in units:
  - Surgeries, Outpatient visits, Mammograms, Inpatient days by type
  - Measured in units, identify where it took place, and potentially also the patient origin
  - Can be used to forecast future workload
- Demand: volume of services needed or desired. Includes unmet demand. When measured, unmet demand can be added to current workload to forecast future demand.
- Supply: measurable source of "assets" to meet the workload or demand. Typically measured in units:
  - Operating rooms, emergency department bays, primary care providers, home healthcare licensed agencies
  - Can be measured in units and location of the asset is typically known
- Capacity: calculated amount of workload an asset can support. Typically measured in units:
  - Cases per operating room, visits per provider, days per inpatient bed
- Use Rate: calculated rate of use by the population
  - 400 ED visits per 1000 population; 3000 annual outpatient visits per 1000 population
- Asset Utilization: calculated rate of use of an asset
  - psychologist is 50% utilized, Operating Room 75% utilized; inpatient beds 80% occupied
  - Often used to calculate need, "e.g. use 85% occupancy to convert ADC to bed need"

Definitions – Key Terms used in Health Planning and Relationship to Levels of Analysis

- Forecast:
  - Quantitative measure of future workload (or future demand) for services and assets
    - By demographic group
    - Geographic area, etc.
  - Forecasts are developed based on current workload data, a use rate of the population, and a change in the size/profile of the population. When possible, it also reflects quantifiable Unmet Demand
  - Criteria for Level 2 Analysis is availability of Workload data

- Current Gaps & Future Needs:
  - Estimation of future demand for services based on data other than Workload data
    - Use rates
    - National benchmarks and averages
    - Desired ratios of assets to population
    - Recent literature regarding trends
    - Influence/impact of federal and state-based health reform initiatives
  - May be used in the absence of Workload data (e.g., Primary Care)
  - May be used in addition to Workload data (e.g., Post-acute Care)

Year 1 Health Resource Planning: Three Levels of Analysis/ Assessment

- Level 1 = Inventory Only
- Level 2 = Inventory and Forecast (population based forecast; limited narrative about issues)
- Level 3 = Inventory, Estimates of Future Need, Trends and Issues Spotlight

Level 1 – Inventory Only	Level 2 –Inventory and Forecast	Level 3 – Inventory and Estimates of Future Need, Trends and Issue Spotlight

• Dental
• Ob-Gyn
• Midwifery
• "Health Screening and Early Intervention"
  • Mammography
  • Early Intervention Programs
• Optometry
• Chiropractic
• Pharmacy and Pharmacological Services
• Assisted Living
• Rad Onc: LINAC, SRS, Proton
• MRI
• Nuclear Medicine Scanners
• CT Scanners
• Home Health Care
• Lithotripsy
• PET
• Pulmonary Specialty Care (Vent Beds in LTACs)
• Open Heart Surgery/LVAD
• Air ambulance
• Organ Transplant Programs
• ECMO
	• Dialysis units
	• "Emergency Services"
	• "Acute Care Units"
	  • Med/Surg Beds
	  • Pedi Inpatient Beds
	  • "Surgical" - Outpatient and Inpatient Operating Room, ASC
	  • Labor & Delivery
	  • "Post OB Care"
	  • "ICU" (Adult)
	• Specialty Care Units
	  • Coronary Care Units
	  • Burn
	  • "Neonatal Care"
	  • "ICU" (Pedi)
		• "Behavioral and Mental Health Services", includes Mental Health and "Substance Abuse Treatment and Services"
		  • Providers, sites of care
		  • Inpatient, Outpatient & Residential Behavioral Health & Substance Abuse
		• "Primary Care Resources"
		  • Providers
		  • FQHCs
		• Post Acute Care
		  • Skilled Nursing
		  • Inpatient Rehab Units
		  • Long Term Acute Care
		  • Long Term Care
		  • Hospice and Palliative care *(pending full review of data availability)*
		• PCI
		• Trauma

Criteria for Levels of Analysis

1. Required by statute
2. Focus of health reform/cost-containment legislation
3. Typically either an overused low-value service or an underused high-value service
4. Affected by expected trends in population and demographics
5. Workload data available

Level 1 - Inventory Only

- Inventory includes
  - Definition of the "asset"
  - Summary of existing quantities/locations
  - Commentary of methods for improving data capture in the future as well as potential trends in use

- Criteria for Inventory Only
  - Workload for individual assets is not known– thus it is not possible to calculate utilization, patient origin, or surplus/deficit on an individual asset basis
  - When there is not a common definition of the resource and how to measure it
  - Data collection is limited to date
  - Not area of focus for Health Planning in Year 1

- Goal in year 1 is baseline data collection with opportunities to expand analysis in future years

- Examples of Inventory Only: Optometry, Chiropractic, Lithotripsy

Level 1 *Example*: Assisted Living

Analytic Plan:

1. Define the asset type: Create a definition of the asset
2. Count Current Supply:
   - Count licensed services (if known) using data available in the Commonwealth
   - Develop a table , organized by primary market care, of all facilities
   - Document of assumptions, methodology, caveats, definitions, data sources
   - Suggestions for improving analysis in future years (if applicable)
3. Provide high level commentary on trends that might effect future demand or supply

Level 1 *Example*: Assisted Living

Health Planning Report:

1. Definition: An assisted living residence is any entity that provides room and board and personal care services for three or more adults and collects payments from or on behalf of residents for the provision of assistance with activities of daily living (ADLs). Assisted living residences operating in Massachusetts must be certified by the state Executive Office of Elder Affairs (Elder Affairs) and meet the requirements set forth in M.G.L. c 19D and 651 CMR 12.00 et seq. (etc.)

2. Current supply: There are 213 certified Assisted Living Residences across Massachusetts in the Commonwealth" as shown in the following table:

Name of Residence	**City**	**Traditional Units**	**Alzheimer /Dementia Special Care Units (SCUs)**
Primary Market 17			
Grove Manor Estates	Braintree	55	15
Sunrise of Braintree	Braintree	51	28
The Glen at Grove Manor	Braintree	40	0

3. High level commentary: Assisted Living is typically not covered by insurance, and is thus dependent on a person's ability to pay for this service. It is affected by trends in personal wealth/income, the aging of the population, and the availability of potentially alternative services such as long term care, home health care, and senior housing. Massachusetts does have MassHealth and low income individuals in Assisted Living.

Level 2 Analysis

1. Level 2 includes
   - Inventory of the asset's supply
   - Existing workload, forecasted forward by population only, compared to existing supply, typically based on an asset utilization and throughput target
   - Potentially some commentary of methods for improving data capture in the future
2. This is similar to how other states' health resource plans do their planning/CoNs
3. Develops baseline for future planning activities
4. Examples: Dialysis, Med/Surg Units, Operating Room

Level 2 *Example*: Operating Room

1. **Define the asset type:** Create a definition of Operating Room, with inclusions and exclusions (e.g. excludes c-section and endoscopy rooms, includes unstaffed rooms, etc.)
2. **Determine Current Workload:**

- Number of cases performed (from the Hospital Discharge Database and the ASC Database), using the location of the facility (not patient residence) for the analysis
- Multiply the number of cases by an average case duration and OR turnaround time (e.g., 3 hours for inpatient procedures and 30 minutes for room turn) to get total OR hours used

3. Measure Current Supply:

- Count licensed operating rooms in each service area using the definition created
- Add the number of operating rooms for which certificates of need have been issued or settlement agreements signed but which are not yet licensed
- Multiply the number of available ORs by their expected productivity (e.g., hours per day, days per year, room utilization max)
- Calculate the utilization rate for each licensed facility

4. Forecast Future Needs:

- Project an increase or decrease in surgical hours in proportion to the change in the population of the market area
- Adjust projected surgical hours based on patient migration, by comparing the flow of patients from outside the service area who receive surgery at area ORs (in-migration) to patients from the service area who receive surgery at ORs elsewhere (outmigration), if necessary

5. Output:

- Tables of number of ORs, cases & hours for each facility and market area: current and projected future. Compare supply versus current workload and future needs
- Narrative evaluation of results
- Documentation of assumptions, methodology, caveats, definitions, data sources
  - Suggestions for improving analysis in future years (if applicable)
  - Discussion of potential to adjust projected OR productivity or need based on any identified trends

Example Tables – Operating Room Demand versus Supply

Illustrative Only- Not Actual Forecasts

Current workload/demand

Facility Name	Inpatient Cases	Ambulatory Cases	Inpatient Case Time (average)	Outpatient Case Time (average)	Estimated IP Hours Required	Estimated ASC Hours Required	Estimated Total OR Hours Required	Capacity per OR (Hours)	ORs Required 2012	Growth Factor to 2017	ORs Required 2017
Facility 1	1,400	7,000	3.0	1.5	4,200	10,500	14,700	1,872	7.9	5%	8.25
Facility 2	400	1,300	3.0	1.5	1,200	1,950	3,150	1,872	1.7	5%	1.77
Facility 3	0	4,200	3.0	1.5	0	6,300	6,300	1,872	3.4	5%	3.53
Service Market Totals	*1,800*	*12,500*			*5,400*	*18,750*	*24,150*	*1,872*	*12.9*		***13.55***

Current supply/capacity

Service Market: Southeast	Inpatient ORs	Outpatient ORs	Shared ORs	DoN Adjustments	Total ORs	Capacity per OR (Hours)	Total Capacity (Hours)	Net Difference: Demand/Supply
Facility 1	2	3	3		8	1,872	14,976	-0.25
Facility 2	1	2			3	1,872	5,616	1.23
Facility 3		4			4	1,872	7,488	0.47
New CoN				2	2	1,872	3,744	2
Service Market Totals					***17***			***3.45***

This service area has an estimated oversupply of 3.45 ORs or about 20%

Level 3 Analysis

1. Level 3 Includes
   - Description of why these services are important
   - Identification of factors that are influencing changes in the use/demand of these services and existing and/or anticipated gaps
   - Inventory and supply, as best they can be measured
   - Demand and workload, as best they can be measured
   - When workload data are not available, alternative methods are employed, such as using national ratios/benchmarks of demand as proxy for actual Massachusetts experience
   - When workload data are available, they are forecasted forward by population, and can be compared to existing supply, based on an asset utilization target; Forecasted workload can also be compared to alternative scenarios (such as max/min utilization, benchmark utilization, redistribution to alternative sites of care)
   - Spotlight on Issues – a narrative description of shortage/needs/gaps and care trends
   - Recommendations to improve data capture and analysis in future
2. Level 3 Analysis is reserved for the highest priority areas for Health Resource Planning
3. Level 3 Analysis is consistent with the approach taken in other states for high priority services when detailed workload and supply are not available, (e.g., CT, RI and VT)

Level 3 *Example*: Primary Care

1. Define the asset type & overall issues

- Define primary care for the purpose of the resource plan (e.g. private practices, FQHCs, etc.)
- Describe any limitations to current datasets
- Describe why primary care is an important area of analysis, trends in primary care, implications of reform on primary care, summarize research on effect of primary care on overall cost, access, and outcomes, provide data within the Commonwealth on disparities and implications for outcomes and cost

2. Describe the supply & use rates

- List inventory of primary care physicians by type and location; primary care mid-levels by type and location, and geriatricians by location
  - Indicate the source of the data and the limitations of the data
- Describe relationship/percent of primary care to other types of specialists
- Calculate state ratio of primary care per 100,000 population, attempt to measure also at the primary market area; compare among Massachusetts markets, and to other states. Provide source of benchmarks (potentially Dartmouth Atlas, Kaiser State Healthfacts, etc.)
- Develop a map that shows Health Provider Shortage Areas and Medically Underserved Areas, develop a map that shows comparative providers per 100,000 by primary market. Note limitations of data (for example, might be using licensed providers rather than actual FTEs)
- Describe percentage of PCPs accepting new patients, new Medicare patients, new Medicaid patients, if known
- Discuss primary care mid-levels per population (if available) and describe how those resources might augment physicians

3. Describe the current demand patterns & trends

- Estimate current demand and projected future demand
- Estimate current supply and projected future supply, with appropriate caveats
- Summarize, if available, key issues from Community Health Needs Assessments and other reports as it relates to primary care in the state and by region
  - Sources could include, but are not limited to: MA Office of Primary Care, Dartmouth Atlas, Kaiser State Health Facts, National Ambulatory Care Survey, Federal Health Shortage Provider tables, etc

4. Provide recommendations for future plan

- Methods for improving data capture, creating metrics, etc.

Primary Care Example Output (narrative)

Illustrative Only- Not Actual Narrative

9.4.2.1 Community Health Centers/Federally Qualified Health Centers (CHCs/FQHCs)

Community health centers (CHCs) are licensed outpatient clinics. Under the State's administrative regulations and Public Health Code (PHC), federal statutes and regulations, CHCs are defined as public or private non-profit health care facilities located in areas which have demonstrated medical need based on geography, demographics and economic factors. Typically, CHCs are safety net providers and serve as access points especially for the poor, medically underserved populations and areas, and those at risk for poor health status. CHCs provide care to all patients regardless of health insurance status, on a sliding fee schedule based on federal poverty level, family income and size. To ensure that a CHC is responsive to the needs of the community, it is mandated to be governed by a community board of directors, the majority of whom are required to be active registered clients of the center and representative of the race and ethnicity of the population(s) served.

CHCs provide comprehensive, culturally appropriate primary care, behavioral health and/or dental health care services in medically underserved areas, and enabling[186] services in some locations. Core services that CHCs provide directly to patients or through contractual or cooperative agreements include:

- preventive and primary care;
- diagnostic services (lab and x-ray);
- family planning;
- prenatal and perinatal care;
- well child care and immunizations;
- screening for elevated blood levels, communicable diseases, and cholesterol;
- eye, ear and dental screening for children;
- preventive dental services;
- emergency medical and dental services;
- hospitalization; and
- pharmacy services.

Source: CT Statewide Health Facilities and Services Plan 2012

Primary Care Example Output (narrative)

Illustrative Only- Not Actual Narrative

A CHC that receives grants under Section 330 of the Federal Public Health Service Act and is certified to receive cost-based reimbursements for treating Medicare and Medicaid patients is referred to as a federally qualified health center (FQHC). A FQHC look-alike meets all the requirements as grant-funded FQHC but does not receive Section 330 federal grant funding.[187]

There are 14 FQHC corporations in Connecticut.[188] Except for Community Health Center, Inc., the remaining FQHCs are also members of the state's Primary Care Association (PCA), the Community Health Center Association of Connecticut (CHCACT). In addition to core CHC services the federal government requires FQHCs to offer:

- Behavioral health care;
- Cancer and other disease screening;
- Referrals to specialty care and hospital services;
- Medicaid eligibility services;
- Services that enable patients to access services e.g. transportation, translation, case management, home visitation and health education;
- After hours coverage including early morning, evening and weekend hours;
- Written contractual agreements and referral agreements with providers of required services the center does not provide;
- Physical location near a major road or public transportation for easy access;
- Appropriate mix of services for target population;
- Establishment and regular update of health care goals and objectives to address priority needs of the target population; and
- A medical director and appropriately licensed clinicians.

Population served: CHCs accept all patients, with particular focus on poor, underserved, persons at risk for poor health, Medicaid beneficiaries, migrant farmers, the homeless, or the uninsured. CHCs served as the family doctor and medical home for over 8% of the state's population in 2010.

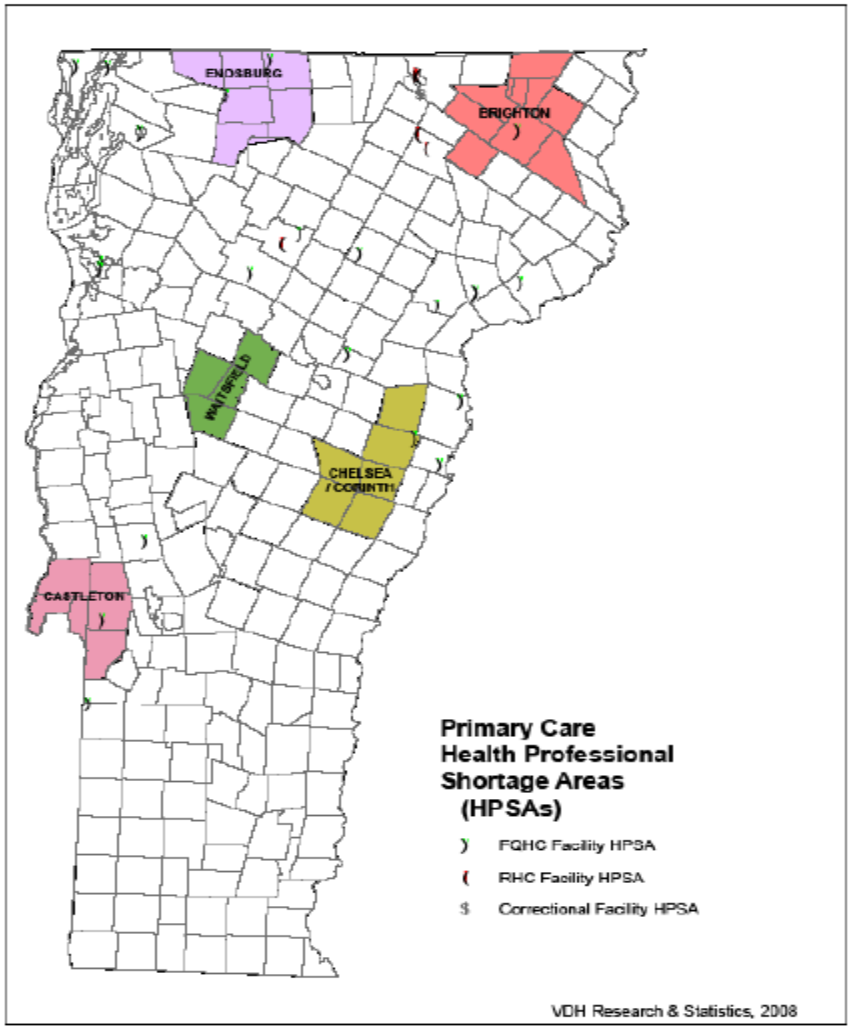
In 2010, federally supported health center corporations with their 175 delivery sites served almost 300,000 patients. The patients were low-income residents, that is the poor below 100% (67%) and 200% (94%) of federal poverty levels; the uninsured (23%); Medicaid beneficiaries (58%); Hispanic/Latinos (46%); African Americans (26%); rural residents (23%); over 1,300 seasonal farmworkers; and 15,000 homeless patients.[189]

Source: CT Statewide Health Facilities and Services Plan 2012

Primary Care Example Output (shortages)

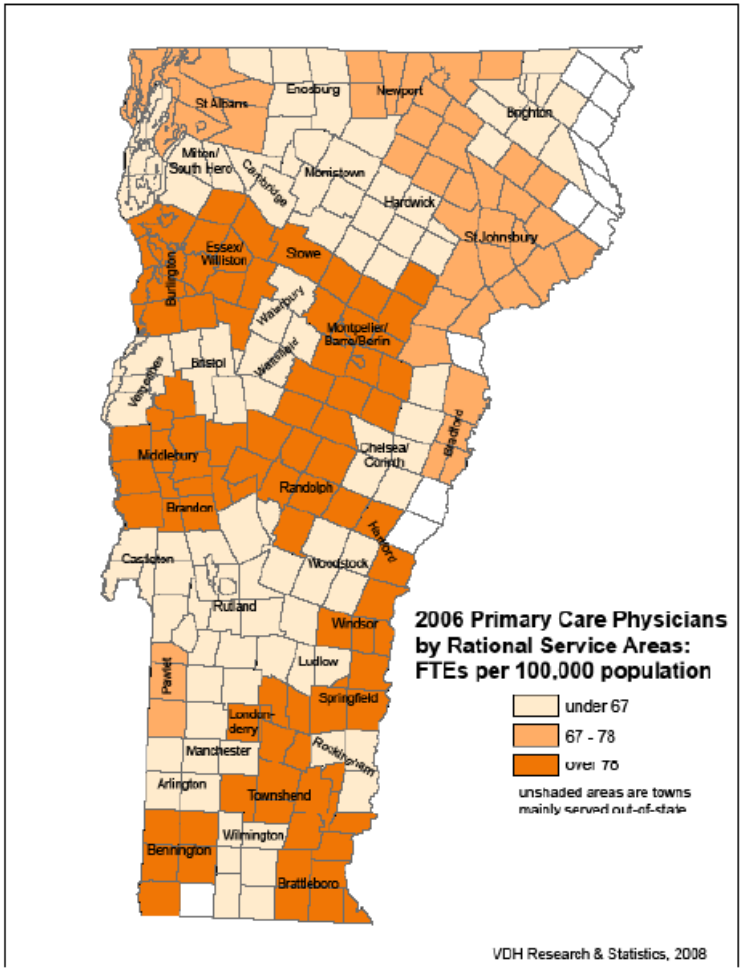
Map 2.1 Primary Care Health Professional shortage Areas

Primary Care Health Professional Shortage Areas (HPSAs)



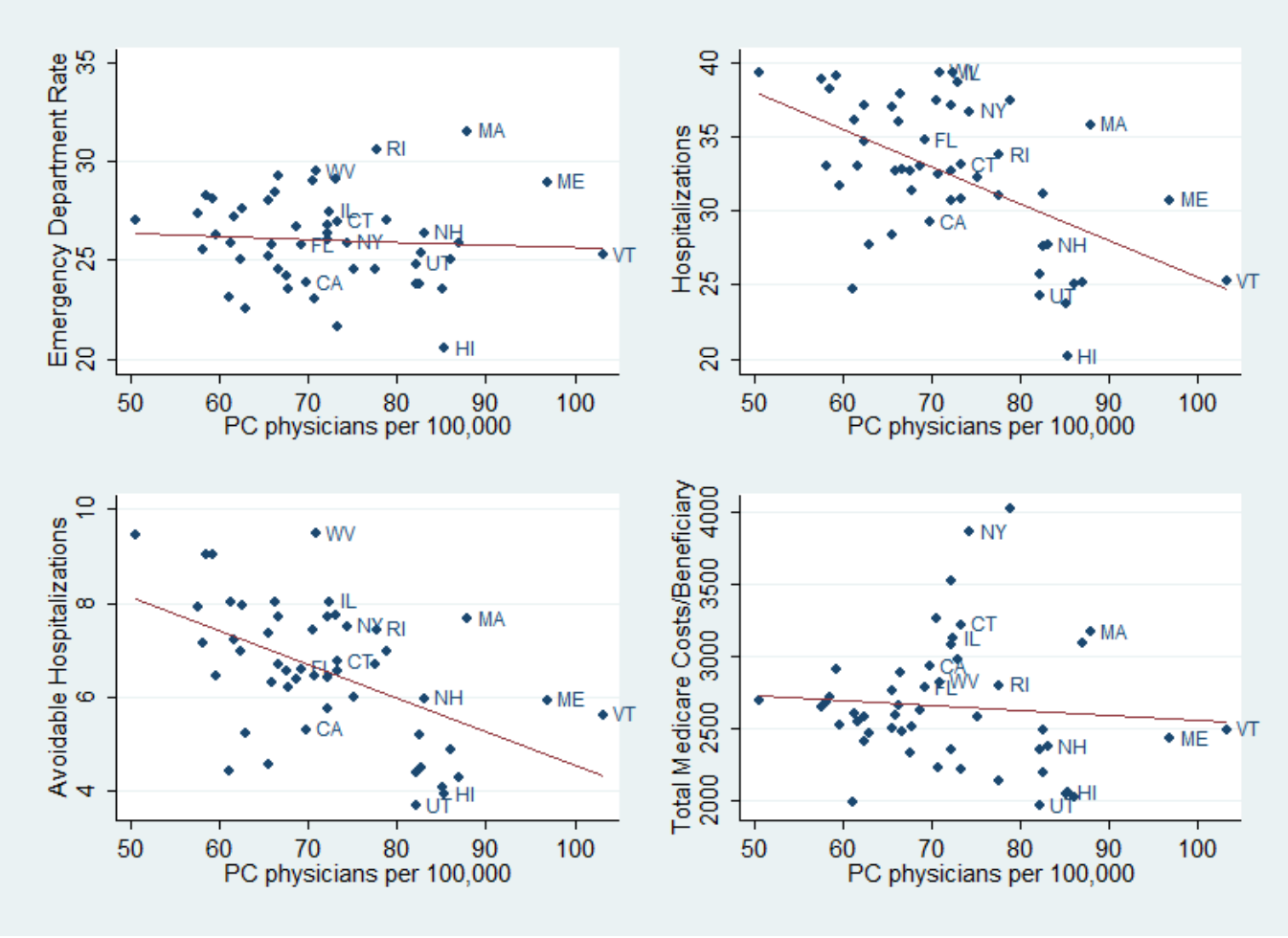
Map 2.2 Primary Care Physician Ratios

Primary Care Physician to Population Ratios by Rational Service Areas



Source: VT Health Resource Allocation Plan, 2009

Example – Using Public Data to Correlate Health Issues with Primary Care



Source: RI Health Care Planning & Accountability Advisory Council; Report to the General Assembly 2013

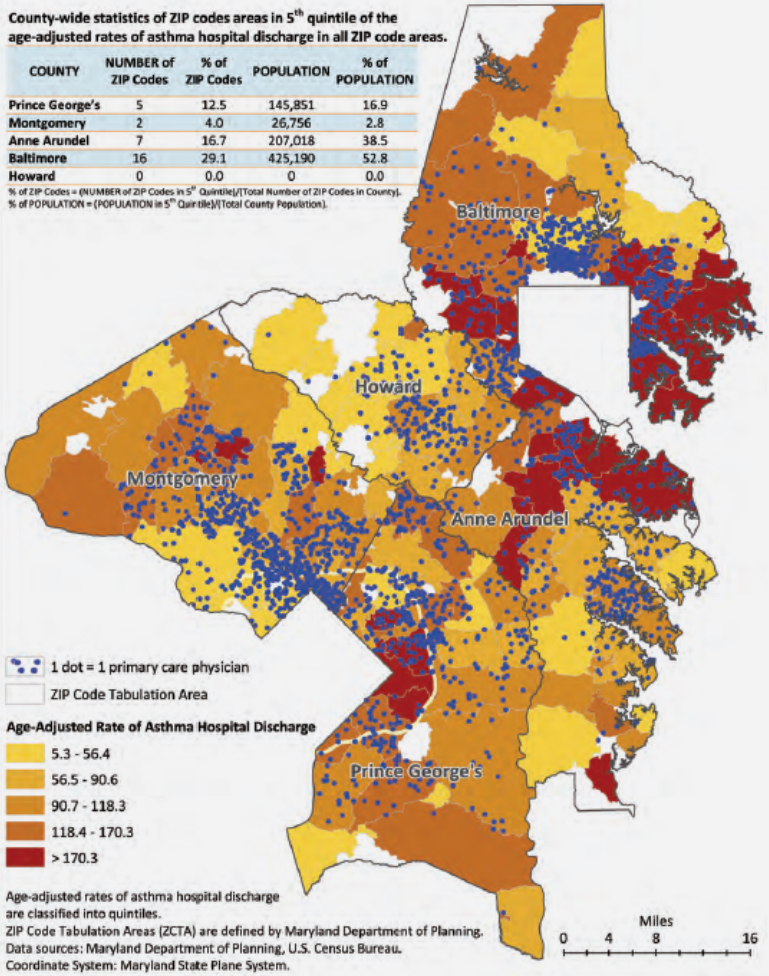
Example - Comparison of Admission Rates by Chronic Disease Within Markets Compared to Location of Primary Care Physicians *(note this might be aspirational…)*

FIGURE 17 **GIS ANALYSIS OF PRIMARY CARE PHYSICIAN LOCATION OVERLAYING AGE-ADJUSTED ASTHMA RATE PER 100,000 RESIDENTS**

County-wide statistics of ZIP codes areas in 5th quintile of the age-adjusted rates of asthma hospital discharge in all ZIP code areas.

COUNTY	NUMBER of ZIP Codes	% of ZIP Codes	POPULATION	% of POPULATION
Prince George's	5	12.5	145,851	16.9
Montgomery	2	4.0	26,756	2.8
Anne Arundel	7	16.7	207,018	38.5
Baltimore	16	29.1	425,190	52.8
Howard	0	0.0	0	0.0

% of ZIP Codes = (NUMBER of ZIP Codes in 5th Quintile)/(Total Number of ZIP Codes in County).
% of POPULATION = (POPULATION in 5th Quintile)/(Total County Population).



Age-adjusted rates of asthma hospital discharge are classified into quintiles.
ZIP Code Tabulation Areas (ZCTA) are defined by Maryland Department of Planning.
Data sources: Maryland Department of Planning, U.S. Census Bureau.
Coordinate System: Maryland State Plane System.

Source: Transforming Health in Prince George's County, MD; 2012

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		  • Hospice and Palliative care *(pending full review of data availability)*
		• PCI
		• Trauma

Data Gaps in Year 1

- Examples of gaps in Supply data
  - Primary Care & Behavioral Health practitioners
    - Number of licensees vs. available hours of clinical practice and by type of practice
    - Practice specialty (and hours) for mid-level practitioners
    - Analogous gap for many other assets
  - For services subject to DoN, differences between approved and built volume or acquired capacity
    - How many approved beds are staffed or even built?
    - How many approved radiology facilities are operating?
    - How many machines are operating?
- Examples of gaps in Workload data
  - MRIs, Mammograms
  - Office Visits for Medical or Behavioral Health
- What data are needed?
  - More detailed Supply data
  - Workload data by patient origin

Data Gaps in Year 1

- What are potential future data sources?
  - APCD
  - New data collection (e.g., survey upon registration)
  - Various reports and studies completed by other Departments
- What are alternative data sources for Year 1?
  - National Center of Health Statistics (CDC) data have been used to forecast age-adjusted national average workload and demand
    - National Ambulatory Medical Care Survey
    - National Hospital Ambulatory Medical Care Survey
  - Other sources include
    - Graham Center Study
    - Kaiser State Health Facts
    - Dartmouth Atlas
    - HRSA, RWJ, etc.
    - Primary research
- These data may be used to estimate the following:
  - Primary Care
    - Numbers of visits & providers (using MGMA Median productivity) for adults, and pediatrics
    - Determine medically underserved areas
    - Correlating public health data with primary care accessibility on a state-wide basis
- Decisions about data sources require clarification of questions to be answered

Next Steps in Development of the Analytic Plan

- Refine questions to be answered in Level 3 Analysis of Primary Care and Behavioral Health
- Clarify Reporting Perspective (i.e., Service Line Report by County vs County Report by Service Line)
- Clarify approach for developing formulas that will be used to turn Supply into Capacity